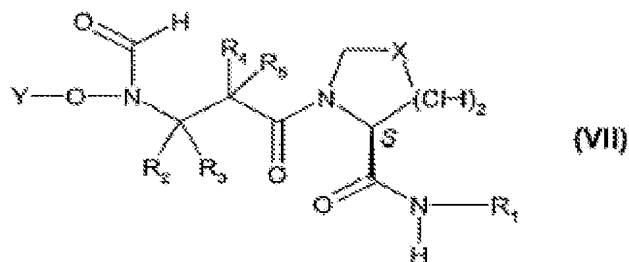


## **AMENDMENTS TO THE CLAIMS**

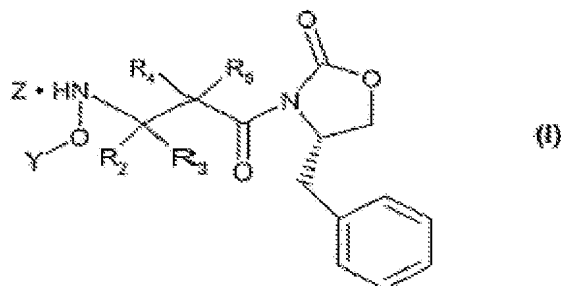
This listing of claims will replace all prior versions of the claims and listing of the claims in the application:

- 1. (Currently Amended)** A process for preparing a compound of the formula (VII)

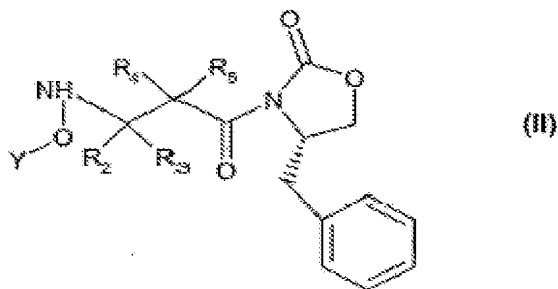


comprising Step 1A:

contacting a compound of the formula (I)

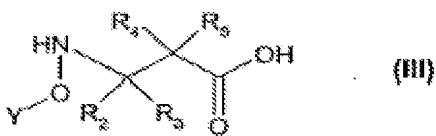


with a base in a suitable solvent to form the free base of compound (I), i.e., compound (II) of the formula (II)



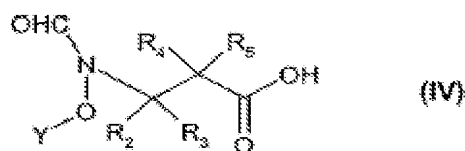
followed by Step 1B:

contacting compound (II) with a strong nucleophile/weak base in a suitable solvent under conditions to form compound (III) of the formula (III)



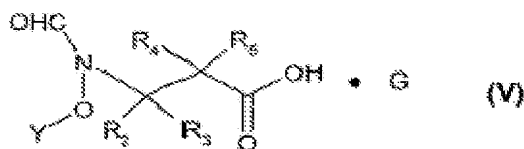
followed by Step 2A:

contacting compound (III) with a ~~formulating~~ formylating agent in a suitable solvent under conditions suitable to form a compound of formula (IV)



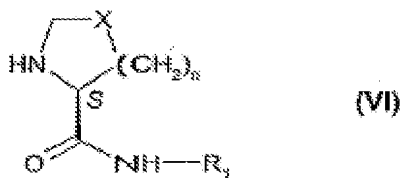
followed by Step 2B:

contacting compound (IV) with an amine or an alkaline metal hydroxide in a suitable solvent under conditions to form a compound of formula (V)



followed by Step 3:

contacting compound (V) with a compound of formula (VI)



in the presence of a suitable base and one or more coupling agents in a suitable solvent under conditions to form a compound of formula (VII)

wherein

Y is a hydroxy protecting group;

each of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> is, independently, hydrogen or alkyl, or (R<sub>2</sub> and R<sub>3</sub>) and/or (R<sub>4</sub> and R<sub>5</sub>) collectively form a C<sub>4-7</sub>cycloalkyl;

G is -O<sup>⊖</sup>metal<sup>⊕</sup> or -OH•amine;

X is -CH<sub>2</sub>-, -S-, -CH(OH)-, -CH(OR)-, -CH(SH)-, -CH(SR)-, -CF<sub>2</sub>-, -C=N(OR)- or -CH(F)-;

R is alkyl;

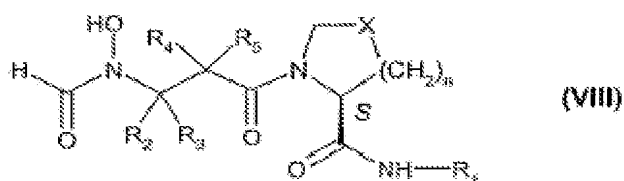
R<sub>1</sub> is aryl or heteroaryl;

Z is a strong organic or inorganic acid; and

n is 0-3, provided that when n is 0, X is -CH<sub>2</sub>-.

2. **(Previously Presented)** The process of Claim 1 followed by Step 4, contacting the compound of formula VII, wherein R<sub>1</sub> is heteroaryl having an N heteroatom, with an oxidizing agent to form the corresponding N-oxide derivative.

3. **(Previously Presented)** The process of Claim 2 followed by the additional step of removing the hydroxyl protecting group of compound VII to form the compound of formula VIII:



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, X and n are as defined above.

4. **(Previously Presented)** The process of Claim 1, wherein

each of R<sub>2</sub>, R<sub>3</sub> and R<sub>5</sub> is hydrogen;

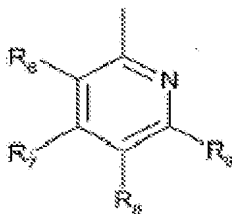
R<sub>4</sub> is butyl;

X is -CH<sub>2</sub>-;

n is 1;

Y is benzyl or *t*-butyldimethylsilyl; and

R<sub>1</sub> is of the formula



wherein

$R_6$  and  $R_9$  are hydrogen;

$R_7$  is hydrogen or  $C_{1-7}$ alkyl; and

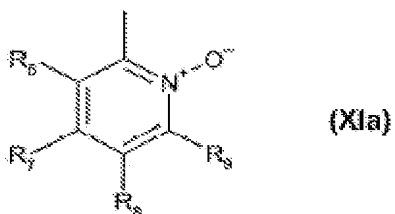
$R_8$  is hydrogen, halogen or  $C_{1-7}$ alkyl.

5. **(Previously Presented)** The process of Claim 4, wherein

$R_7$  is hydrogen; and

$R_8$  is fluoro.

6. **(Previously Presented)** The process of claim 1, wherein  $R_1$  is of the formula (XIa)



each of  $R_2$ ,  $R_3$  and  $R_5$  is hydrogen;

$R_4$  is butyl;

X is  $-CH_2-$ ;

n is 1;

Y is benzyl or t-butyldimethylsilyl;

$R_6$  and  $R_9$  are hydrogen;

$R_7$  is hydrogen or  $C_{1-7}$ alkyl; and

$R_8$  is hydrogen, halogen or  $C_{1-7}$ alkyl.

7. **(Previously Presented)** The process of Claim 6 wherein  $R_8$  is halo or ethyl.

8. **(Previously Presented)** The process of Claim 6 wherein  $R_7$  is hydrogen and  $R_8$  is fluoro.

9. **(Currently Amended)** The process of Claim 1 wherein

for Step 1A the temperature is about  $10^\circ\text{C}$  to about  $40^\circ\text{C}$ , the water soluble base is sodium carbonate, sodium bicarbonate, potassium carbonate, potassium bicarbonate, or an alkaline metal hydroxide, and the solvent is water/ethyl acetate,

for Step 1B the temperature is about  $-10^{\circ}\text{C}$  to about  $10^{\circ}\text{C}$ , the strong nucleophile/weak base is lithium hydroperoxide, and the solvent is THF/water,

for Step 2A the temperature is about  $-20^{\circ}\text{C}$  to about  $20^{\circ}\text{C}$ , the ~~formylating~~ formylating agent is formic acetic anhydride, and the solvent is ethyl acetate,

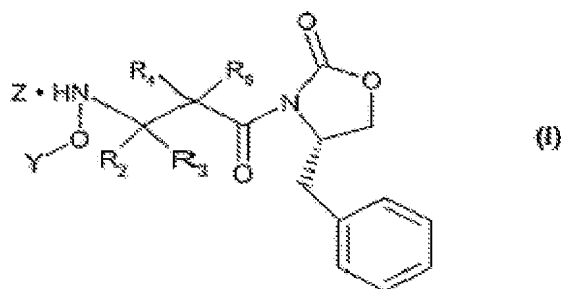
for Step 2B the temperature is about  $-5^{\circ}\text{C}$  to about  $40^{\circ}\text{C}$ , the solvent is heptane and the G substituent is of the formula  $-\text{OH}\cdot\text{amine}$  wherein the amine is dicyclohexylamine,

for Step 3 the temperature is about  $10^{\circ}\text{C}$  to about  $40^{\circ}\text{C}$  ~~th~~, the solvent is water/ethyl acetate, and the coupling agent is EDCI/HOBt, and

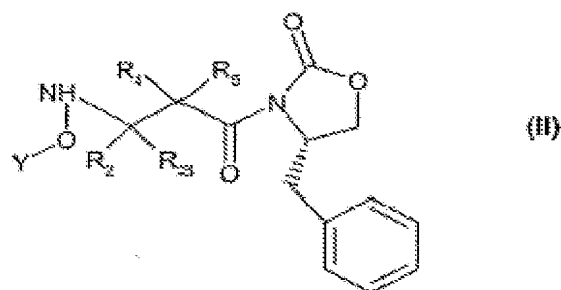
for Step 4 the temperature is about  $10^{\circ}\text{C}$  to about  $35^{\circ}\text{C}$ , the solvent is ethyl acetate and the oxidizing agent is urea/hydrogen peroxide with phthalic anhydride or magnesium monoperoxyphthalate.

10. **(Previously Presented)** A process comprising

contacting a compound of the formula:(I)



with a base in a suitable solvent to form compound (II) of formula

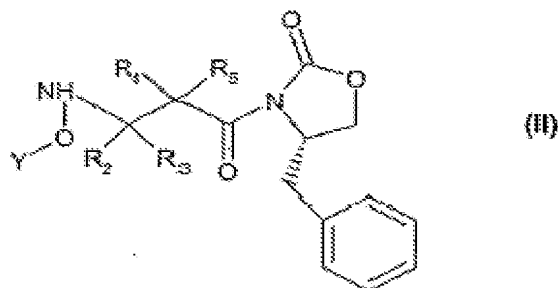


wherein

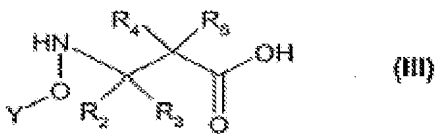
Y is a hydroxy protecting group;

each of  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  is, independently, hydrogen or alkyl, or ( $R_2$  and  $R_3$ ) and/or ( $R_4$  and  $R_5$ ) collectively form a  $C_{4-7}$ cycloalkyl;  
and Z is a strong organic or inorganic acid.

11. **(Previously Presented)** A process comprising contacting compound (II) of the formula



with a strong nucleophile/weak base in a suitable solvent under conditions to form compound (III) of the formula



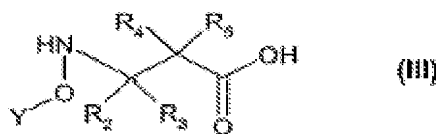
wherein

Y is a hydroxyprotecting group; and

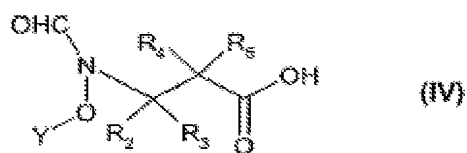
each of  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  is, independently, hydrogen or alkyl, or ( $R_2$  and  $R_3$ ) and/or ( $R_4$  and  $R_5$ ) collectively form a  $C_{4-7}$ cycloalkyl.

12. **(Previously Presented)** A process comprising

contacting compound (III) of the formula



with a formulating agent in a suitable solvent under conditions suitable to form a compound of formula (IV)



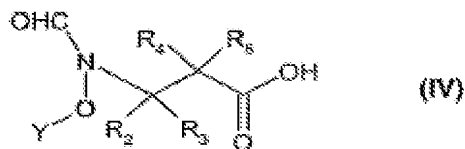
wherein

Y is a hydroxy protecting group; and

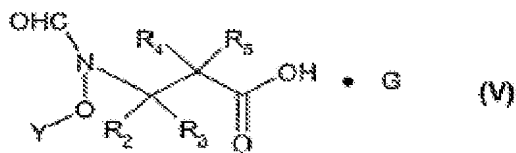
each of  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  is, independently, hydrogen or alkyl, or ( $R_2$  and  $R_3$ ) and/or  $R_4$  and  $R_5$ ) collectively form a  $C_{4-7}$ cycloalkyl.

13. **(Previously Presented)** A process comprising

contacting compound (IV) of the formula



with an amine or an alkaline metal hydroxide in a suitable solvent under conditions to form a compound of formula (V)



wherein

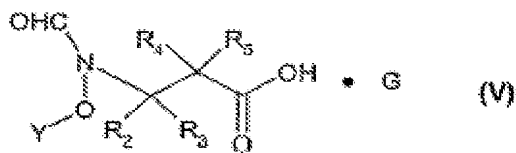
Y is a hydroxy protecting group;

each of  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  is, independently, hydrogen or alkyl, or ( $R_2$  and  $R_3$ ) and/or ( $R_4$  and  $R_5$ ) collectively form a  $C_{4-7}$ cycloalkyl; and

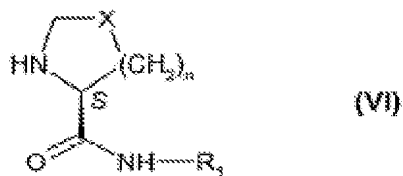
G is  $-O^{\ominus}\text{metal}^{\oplus}$  or  $-OH\cdot\text{amine}$ .

14. **(Previously Presented)** A process comprising

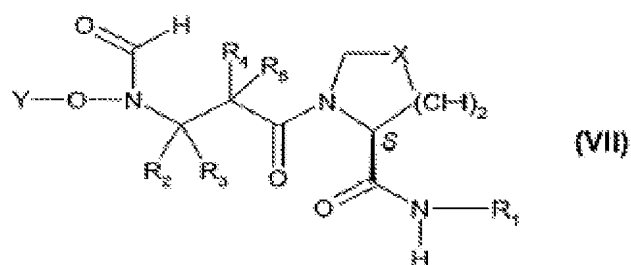
contacting compound (V) of the formula



with a compound of formula (VI)



in the presence of a suitable base and one or more coupling agents in a suitable solvent under conditions to form a compound of formula (VII)



wherein

Y is a hydroxy protecting group;

each of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> is, independently, hydrogen or alkyl, or (R<sub>2</sub> and R<sub>3</sub>) and/or (R<sub>4</sub> and R<sub>5</sub>) collectively form a C<sub>4-7</sub>cycloalkyl;

G is -O<sup>⊖</sup>metal<sup>⊕</sup> or -OH•amine;

X is -CH<sub>2</sub>-, -S-, -CH(OH)-, -CH(OR)-, -CH(SH)-, -CH(SR)-, -CF<sub>2</sub>-, -C=N(OR)- or -CH(F)-;

R is alkyl;

R<sub>1</sub> is aryl or heteroaryl; and

n is 0-3, provided that when n is 0, X is -CH<sub>2</sub>-.

15. (New) The process of claim 1, wherein

Y is a hydroxy protecting group;

R<sub>2</sub>, R<sub>3</sub>, and R<sub>5</sub> are hydrogen;

R<sub>4</sub> is alkyl;

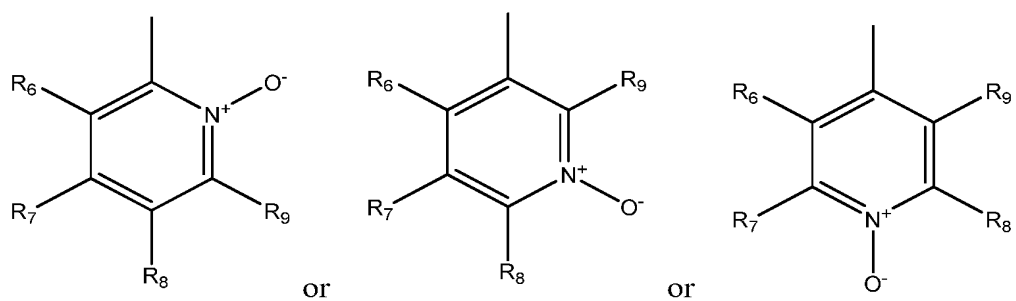
X is -CH<sub>2</sub>- or -CH(F)-; and

R<sub>1</sub> is heteroaryl.

16. (New) The process of claim 15, wherein

R<sup>1</sup> is:





17. (New) The process of claim 1, wherein

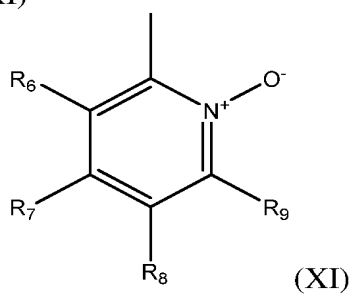
Y is a benzyl group;

R<sub>2</sub>, R<sub>3</sub> and R<sub>5</sub> are hydrogen;

R<sub>4</sub> is *n*-butyl;

X is -CH<sub>2</sub>-; and

R<sub>1</sub> is a heteroaryl of formula (XI)



wherein

R<sub>6</sub>, R<sub>7</sub>, and R<sub>9</sub> are hydrogen; and

R<sub>8</sub> is fluoro.